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Results of the initial sampling (August 28th) of the 2006, First-Stubble, Sugarcane Maturity Test at the USDA-ARS Sugarcane Research Laboratory's Ardoyne Research Farm at Schriever, LA are attached. The first sampling is generally done at the start of the last week in August. The study is designed to examine the natural ripening process and compare the results for the same harvest dates over a 5-yr period (2001 – 2005); consequently, a glyphosate-containing ripener is not applied. Samples consist of 15, hand-cut stalks of clean, trash-free and properly topped cane from each of four replications. **When mechanically harvested, one can expect TRS/TC levels to be 10 to 20% lower as a result of additional trash in the cane.** The study includes eight released Louisiana varieties: LCP 85-384, HoCP 85-845, HoCP 91-555, Ho 95-988, HoCP 96-540, L 97-128, L 99-226, and L 99-233 and one Florida variety, CP 89-2143. The variety CP 70-321 was not included in the 2005 plant-cane maturity study because of declining acreage; hence will not be contained in any of the maturity studies for 2006.

Comparisons between the August 2006 and 2005 sampling dates can not be made as the 2005 sampling date was scheduled for August 29th, the day Hurricane Katrina came ashore. However, for the varieties contained in the earlier maturity studies for this sampling date, stalk lengths and weights are equal to and in most cases greater than in the previous years. Stalk diameters and densities were first reported in this study with the September 12, 2005 sampling. Although this sampling is done two weeks earlier, both stalk diameters and densities are higher in 2006. As a reminder, the Ardoyne Farm site received timely rains during June and July when most other areas of the sugarcane belt were reporting some moisture stress and rains have been received to sustain growth in August and to date the varieties have not lodged.

As a result of the continued growth and rainfall, juice purities and ultimately theoretically recoverable sugar levels per ton of cane (TRS/TC) are disappointingly low when compared with the results for the varieties in the first-stubble maturity tests harvested in previous years. The highest purity (70.0%) was obtained with HoCP 85-845 and the lowest with HoCP 91-555. TRS levels for LCP 85-384 are nearly 25% lower than for the August 2004 sampling and 30% lower than the September 12, 2005 sampling. As expected, L 97-128 has the highest sugar yield (145 lbs./TC) for this sampling but TRS/TC yields are 21 and 26% lower than those in 2004 and 2003, respectively, for this sampling period. Of the two newly released varieties, L 99-226 has sugar levels equivalent to HoCP 96-540 with L 99-233 having a TRS/TC level more in line with HoCP 91-555 and Ho 95-988. The Florida variety, CP 89-2143, has the shortest yet largest diameter stalks of the varieties being evaluated with TRS/TC levels that are significantly lower than L 97-



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128 and HoCP 85-845 and more in line with the TRS/TC levels for LCP 85-384, HoCP 91-555, Ho 95-988, and L 99-233 at this sampling time.

The second sampling for the maturity test is scheduled for September 11th. Hopefully, weather will improve to hasten the natural ripening process of commercial fields and improve TRS/TC levels in response to the application of glyphosate ripeners.

Reminder. If you would like to discontinue your receipt of these reports in 2006 or if you know of individuals who would like to begin receiving this information in 2006, please contact Mrs. Sandy Roberts by email (sroberts@srrc.ars.usda.gov). Emailing insures address accuracy.

Maturity study reports are prepared by Dr. Ed Richard of the USDA-ARS Sugarcane Research Unit and Dr. Ben Legendre of the LSU AgCenter.

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Variety	Year	Stalk ²				Normal juice ³			Sugar yield
		Wt. (lb.)	Lh. (in.)	Dia. (in.)	Density (g/cm3)	Bx. (%)	Su. (%)	Pu. (%)	TRS (lb.)
L 99-233	2006	1.6	81	0.75	1.18	10.98	6.78	61.71	104.6
	2005 ⁴	---	---	---	---	---	---	---	---
	2004	1.4	81	---	---	---	---	67.61	140.3
	2003	---	---	---	---	---	---	---	---
	2002	---	---	---	---	---	---	---	---
Averages ⁵	2006	1.7	77	0.85	1.10	11.11	7.12	64.07	113.2
	2005	---	---	---	---	---	---	---	---
	2004	1.5	82	---	---	---	---	69.20	151.3
	2003	1.4	72	---	---	---	---	72.40	164.3
	2002	1.6	77	---	---	---	---	67.40	125.0

¹ Data for each parameter represents the average of four replications of 15 stalks each.

² Stalk diameter and density based on a subsample consisting of 8 randomly selected stalks from the 15-stalk sample of each rep.

³ Brix factor = .8854; Sucrose factor = .8105.

⁴ No data taken due to hurricane Katrina for year 2005.

⁵ Averages are based only on varieties included in previous year's first-stubble maturity study (LCP 85-384, HoCP 85-845, HoCP 91-555, and HoCP 96-540).